

Watershed Coalition

News

INFORMATION FOR CENTRAL VALLEY AGRICULTURE

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Water Board Vets New Groundwater Regulations

The much anticipated "Staff Recommended" Long Term Irrigated Lands Regulatory Program (ILRP) outlining new regulations on ground and surface waters in the Central Valley got its first airing at four public workshops held September 8-10. If there were any surprises at the meetings, it was a lack of "fireworks" from either side, unlike 2003 when the surface water regulations were adopted.

Likewise for a Regional Water Board meeting held on September 22 in Rancho Cordova. Staff provided the board a progress report on the Environmental Impact Report (EIR) and previewed the staff recommended program. Agriculture coalitions and environmental justice representatives were each allotted time to voice their positions and suggest improvements. Although at odds over the need to report fertilizer use, there was agreement on both sides that the Water Board should focus first on problem areas and not create overly burdensome regulations on agricultural.

The September 22 Regional Board meeting is the last public vetting of the Long Term ILRP before it goes before the full board for a formal vote in March 2011. Notwithstanding challenges in court, the program adopted in March will fundamentally change how groundwater quality and agriculture are regulated in the Central Valley.

In the public workshops and Regional Board meeting in September, Central Valley coalitions stressed the need to coordinate with existing local and state groundwater programs including Integrated Regional Water

Management Plans (IRWMP) as the new Long Term ILRP is put into place. The board was also asked to use existing sources of groundwater quality information from entities such as Groundwater Ambient Monitoring & Assessment Program (GAMA), Department of Pesticide Regulation (DPR), CV-SALTS, Department of Public Health and Department of Toxic Substances Control.

In a detailed comment letter signed by watershed coalitions, irrigation districts and farm organizations, the Regional Board was criticized for preparing an EIR that was "superficial and inadequate to analyze the environmental impacts associated with the five alternatives as well as the Recommended Program Alternative (RPA)." The groups also asked for reasonable time frames (no less than three years) to develop local programs through the Long Term ILRP that address prioritized groundwater quality problems.

The board was asked to clarify the criteria used to designate lands as Tier 1 and Tier 2 and encouraged them to base the decision on scientific, quality-controlled data. Also that the Tier 2 groundwater designation initially be limited to DPR groundwater management zones and areas where nitrates or other constituents are known to affect drinking water quality.

A revised EIR and recommended program alternative is expected to be released in January or February 2011. That version will reflect what, if any changes were made as a result of public comments. ☞

No Fee Increase In 2011

A proposed fee increase from 12 to 49 cents an acre was pulled at the last minute from the final state budget signed by Governor Schwarzenegger on October 8, 2010. Active lobbying by agricultural interests, led by Western Growers and California Farm Bureau Federation, helped reverse an effort by state lawmakers to remove general fund support in fiscal year 2011 for irrigated lands programs overseen by the State Water Resources Control Board.

General funds from the state budget plus the current 12 cents an acre paid by landowners are combined to pay for staff at all Regional Boards in the state with irrigated lands

programs. Increasing the fee to 49 cents per acre would have shifted the full costs of running the programs to landowners.

The issue of fee increases will likely resurface again once the Central Valley Regional Water Board adopts its new Irrigated Lands Regulatory Program. Adding groundwater to the new program will increase staff workloads and likely result in an attempt to hire more state workers. Staffing requests for fiscal year 2012 are made when each board determines upcoming year workloads and expenses. Such a proposal might be expected in spring 2011 when a draft budget is usually released. ☞

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Coalitions Pushing Back On Legacy Pesticides Requirements

An effort is underway by Central Valley watershed coalitions to remove “legacy” organochlorine pesticides from their routine water monitoring program requirements. Legacy organochlorine pesticides, including DDT and its breakdown product DDE, are still considered water quality contaminants originating from agriculture by the Regional Water Board and are part of coalition monitoring requirements along with current use pesticides, nutrients, physical parameters such as pH and dissolved oxygen (DO), sediment, pathogens and other constituents.

The effort to change requirements is focused on the Technical Issues Committee (TIC), a stakeholder group in place since the Irrigated Lands Program started in 2004. The TIC is made up of Regional Water Board staff, coalition leaders and their technical consultants, and other state and county entities. In August, the TIC formed a “Legacy Pesticide Work Group” to examine the scientific issues related to source identification, monitoring frequency and potential mitigation measures.

The current monitoring requirements presume irrigated fields hold a “bank” of legacy organochlorine pesticides that leak into waterways in irrigation drainage or storm water runoff. And since organochlorines were once applied to fields in the Central Valley (DDT was banned in 1972), they are assumed to be the source.

Ag interests are not convinced. Sources that need further study are stream bed sediments that still contain legacy pesticide residues being mobilized by rapid or turbulent flows. Levels of detection in water analysis instruments are in parts per quadrillion so even minor levels of turbidity could result in detections or exceedances. The water quality objective for DDT is .00059 micrograms per liter or 5.9 parts per quadrillion.

The goal of the legacy pesticide subcommittee will be to identify potential sources of legacy organochlorine compounds originating from irrigated agriculture, either found in the soils of agricultural fields and moved to surface waters during irrigation or storm water runoff. The effort will also:

- Identify data necessary and sufficient to reject the hypotheses that agricultural is the primary source;
- Determine if those data exist and if so, obtain them and document the evaluation of the hypotheses in a report presented to the TIC;
- If data do not exist, identify methods/experimental designs sufficient to generate the data;
- Evaluate potential cost of performing experiments relative to cost of continued monitoring. ☞

Growers Face Regulatory Challenges from Pesticide Drift and Runoff

Regulatory pressure continues to build on growers after years of exceedances of state water quality standards for organophosphate (OP) and pyrethroid insecticides in California waterways. Regulatory programs are being set up that could lead to prohibition of discharges and fines.

Statewide, the California Department of Pesticide Regulation (DPR) is proposing surface water regulations similar to the dormant spray regulations currently in effect. These statewide regulations would require growers to implement water management plans and adopt best management practices to reduce drift and runoff into surface waters.

A reevaluation of both chlorpyrifos and diazinon by DPR has led to requirements of the product registrants, Dow AgroSciences and Makhteshim Agan respectively, to track and report to state agencies any water quality exceedances in Central Valley and Central Coast watersheds. Both companies have made significant label changes including widening of buffer zones and continuing product stewardship efforts, focusing on application precautions and managing field runoff.

A county in Sacramento Valley made chlorpyrifos a restricted material and now requires a Notice of Intent (NOI) on all uses of the insecticide. Changes in uses include restrictions on applications if irrigation is planned or if rain is forecast within 72 hours. Violations of permit conditions are subject to fines. Chlorpyrifos is typically applied in the county from spring through late summer to crops such as alfalfa, almonds and walnuts. Dormant orchard applications have not been allowed since 2005.

In the South Valley, a Total Maximum Daily Load (TMDL) is now in place for chlorpyrifos and diazinon in the San Joaquin River, from Mendota Pool to Vernalis. According to the TMDL adopted by the Regional Water Board in 2009, exceedances in the SJR after December 31, 2010 could lead to the Regional Water Board filing prohibition of discharges or fines against growers who discharge either pesticide into surface waters.

Unfortunately, instead of changing practices to correct off-site movement of pesticides, some growers are just changing products. Changing products but not changing practices that allowed products to leave the field ends up shifting the problem to other products. Now, those products are being found in waters and are facing increased regulatory pressure.

A prime example is some growers have switched from OPs to pyrethroid insecticides (Asana, Capture, Baythroid, etc.). These insecticides can also move off fields through irrigation or storm water drainage that contains sediment. When pyrethroids accumulate in stream sediment, they can cause toxicity to test organisms. Watershed coalition sampling in the Central Valley has identified several sites with sediment toxicity, some associated through chemistry analysis with pyrethroid insecticides. Pyrethroids are now proposed for inclusion in state 303(d) listing for impairments, a status that could eventually lead to a pyrethroid TMDL.

Growers are showing they can change practices as is being shown by the East San Joaquin Water Quality Coalition where 23 waterways are under Management Plans for chlorpyrifos. As part of the implementation plans, coalition representatives hold individual meetings with landowners. Discussions focus on farming practices that can be used to prevent pesticides from reaching waterways, including spray drift management and controlling storm water or irrigation drainage. Exceedances of chlorpyrifos are down in watersheds where visits were made but continue to be found in other areas. Over the next seven years, the coalition plans to take a similar approach with all 23 watersheds with Management Plans.

Growers, applicators, and landowners are encouraged to contact their water quality coalition representative, local UC farm advisor, or Natural Resources Conservation Services representative for development of a site specific water quality management plan. ☞

July Sampling Finds Repeated Pesticide Exceedances

Water sampling in July 2010 found 12 waterways in western Stanislaus and Merced counties that were exceeding the state standard for chlorpyrifos (Lorsban, NuPhos, Govern, etc). Fortunately, none of the samples were found to have toxicity to water flea (*c. dubia*), indicating the exceedances were relatively low yet still above the state standard.

June and July are typically high use periods for applying insecticides for several pests in alfalfa and walnuts, particularly aphids, armyworms and codling moth. In past years, chlorpyrifos exceedances during the summer have been tracked to either a treated field with irrigation drainage or where spray drift

reached nearby waterways with sampling stations.

The Westside Coalition was disappointed with the results, particularly since the exceedances were recorded in waterways where Management Plans for chlorpyrifos have been adopted by the Regional Water Board for past exceedances. The plans, written by the coalition and approved by the Board, include requirements such as source identification and tracking of management practices used in fields adjacent to the waterways. Based on the July results, growers operating near those waterways can expect to be contacted by the Westside Coalition in its efforts to solve the water quality problems. ☞

USDA Funding For BMPs Enters Year Three

A program to help growers pay for on-farm water quality BMPs is expected to receive another \$1.5 million in 2010-11, year three of funding that now totals \$5 million since 2009. The USDA Agricultural Water Quality Enhancement Program (AWEP) is focused on watersheds in Stanislaus, Merced and Madera counties that are currently under coalition management plans. AWEP can fund approximately 50% of the statewide average cost for installation of practices such as holding ponds, recirculation systems, equipment for applying PAM and other practices.

The program is administered through the Natural Resources Conservation Service (NRCS) with outreach support from the Coalition for Urban Rural

Environmental Stewardship (CURES) who worked in conjunction with the Partnership for Agriculture and the Environment, a coalition of the Stanislaus and Merced County Farm Bureaus, Almond Board of California, and Western United Dairymen and Environmental Defense Fund to secure the funding.

The AWEP project was approved under the 5-year Farm Bill but requires annual funding renewals in the USDA budget. Applications are open through November 12, 2010 for the 2011 round of funding and are handled through local offices of the NRCS. Applications after the deadline can be applied to the fourth round of funding. ☞

Westside Offers BMP Funding

The Westside San Joaquin River Watershed Coalition is offering its members a total of \$30,000 for constructing new tailwater silt ponds or to clean out existing silt ponds. The program will fund 75% of the costs of any single project, up to a maximum of \$6,000 per project. Applications for the funding are available from local water districts in the coalition region. ☞

East San Joaquin Shows Second Year of Progress

For the second year in a row, two waterways under management plans in the East San Joaquin Water Quality Coalition region have shown no toxicity to test organisms or exceedances of pesticide standards for chlorpyrifos (Lorsban, NuPhos, Lock-On, Govern, etc.), copper or diuron (Karmex). The two waterways, Mariposa Creek/Duck Slough in Merced County and Prairie Flower Drain in Stanislaus County, were sampled in the summer months of 2010 during the high pesticide use period and in accordance with requirements from the Regional Water Board.

Between 2005 and 2008, coalition sampling of the two waterways found eight exceedances of chlorpyrifos during the summer months. In winter 2008-09, coalition representatives made on-farm visits to members adjacent to the waterways and upstream of the sample site. In the visits, information was gathered on existing farming practices used on the fields next to the waterway. Discussions also covered practices to prevent future movement of farm inputs from fields.

The coalition began its next phase of on-farm visits with coalition members in spring 2010. The four priority watersheds are in Madera and Merced counties (Cottonwood Creek, Bear Creek and Duck Slough (west of hwy 99) and Highline Canal). Chlorpyrifos and copper were again the farm inputs causing exceedances in the waterways during the spring/summer months, although exceedances of diazinon and chlorpyrifos, likely from winter dormant orchard sprays, were also recorded between 2005 and 2009. In coalition sampling between February and July 2010, none of the priority pesticides were detected in the waterways covered in the second phase. Copper was the only farm input found in a single creek during April and May 2010.

Whether coalition efforts can be credited with the absence of pesticide exceedances cannot be said with 100% certainty. However, two years of no exceedances in targeted watersheds continues a positive trend and adds to the case that the coalition's management plan strategy can be effective. ☞

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Watershed Coalition

South Valley Coalition Continues to Find Minimal WQ Impacts From Agricultural

With the first two quarters of water monitoring in 2010 now completed, the South San Joaquin Water Quality Coalition (SSJWQC) continues to show near zero impact from agricultural operations on surface water quality. Increased snow melt and flows in local rivers, streams and conveyances led to more sampling in 2010 and results to date are encouraging.

Water quality in the Kings River remains consistently good from below Pine Flat Dam through Kings County, with only minor increases in EC at the extreme lower reaches. High EC is a function of soil conditions in the area rather than influences from agricultural operations. While toxicity to water flea was found in Gould Canal, cooperation with landowners appears to be sufficient to prevent triggering of management plan requirements. ☞

Kings River Conservation District aids in AWEPP Project Scoring

The Kings River Conservation District (KRCD), in cooperation with the Natural Resources Conservation Service (NRCS), helped develop additional locally defined scoring criteria for the Agricultural Water Efficiency Program (AWEPP) within the Kings River service area (Fresno, Kings and Tulare counties). This 5-year program provides 50 percent cost share for projects that increase the available supply of agricultural water and the protection of surface and groundwater quality through improvements in water use efficiency. The program is administered by the NRCS.

The KRCD combined local knowledge of the Kings River watershed with data from the Department of Pesticide Regulation to define zones where risks to surface or groundwater are greatest. Applicants within these areas are awarded extra points toward their final score used by NRCS to rank projects. This results in promoting conversion from flood/furrow irrigation to higher efficiency systems in these high risk areas. Applicants inside these zones have an excellent chance to be awarded funding for projects due to the increasing level of resources committed by NRCS over the remaining 3 years of the AWEPP program. Contact the NRCS office in Fresno for an application and related requirements. ☞

Rubble Weirs in Field Drains Show Promise

Constructing rubble weirs at the bottom of an orchard where storm water flows converge is showing mixed results for control of sediment and agricultural chemicals.

The weirs are installed in an orchard in eastern Fresno County and consist of highly porous field stones along with organic medium (wood chips) contained in burlap bags placed upstream of the rock.

The structures have shown positive results in slowing the movement of coarse sediments downstream as evidenced by the accumulated sandy sediments on the upstream faces. The clay content of the surrounding soils has proven more difficult to control (evidenced by no measurable change in overall turbidity of the samples) as these particles move through the medium fairly freely.

The organic medium/wood chips have not decomposed adequately to filter organic chemicals although the approach appears promising. Several heavy storms in 2009-2010 created sufficient flows to overtop the structures but none were breached. Maintenance in fall 2010 includes increasing the amount of organic material on the upstream face, removal of some of the accumulated sediments and efforts to minimize the amount of water bypassing the organic medium. Construction of a second weir downstream of the first, which creates a settling pool between the structures, is also planned.

Another south valley irrigation district has expressed interest in constructing similar structures for sediment control in a drainage channel. ☞

Longley Reappointed to Regional Water Board

Karl Longley was re-appointed by Governor Schwarzenegger for another term on the Central Valley Regional Water Quality Control Board. Longley, who is the board representative for "Water Quality," has served on the board since 1993 and also held chairmanships from 2006 to 2009 and from 1993 to 1997. Longley is a retired dean of engineering from California State University, Fresno and is currently Director Emeritus for the California Water Institute at CSUF. ☞

On-Farm Inspections Verify Lack of Discharge

A claim of "no discharge" often leads to inspections by Regional Water Board staff and in some cases, results in agreement with the landowner's claim. In July and August 2010, Regional Water Board staff made 29 such property inspections when landowners claimed that an irrigated parcel did not have the potential to discharge irrigation drainage or storm runoff into waters of state. In all 29 of those cases, the Regional Water Board inspector agreed with the grower's claim. In May and June, the Regional Board performed 32 property inspections but did not report the outcomes.

The "no discharge" claims and follow-up inspections are in response to postcards and enforcement letters being mailed to owners of parcels who are not members of watershed coalitions. The grower groups are required to annually submit to the Regional Water Board a list of members. Comparing those member lists to county tax assessor roles and state and federal agricultural land use databases yields a list of landowners who are subsequently contacted by mail by the Regional Water Board. The initial contact is typically with an outreach postcard. If the landowner does not respond, a 13267 Technical Report request is issued. Non response to the 13267 request results in a Notice of Violation and possible fine.

From March through August 2010, the Regional Water Board also took the following enforcement actions:

- Mailed 372 outreach postcards to landowners in Stanislaus, Butte and Lake counties;
- Issued 60 13267 orders to potential owners of irrigated crop land in Contra Costa, Lake and San Joaquin counties who had not responded to postcards;
- Issued 42 Notice of Violations to landowners in counties covered by the East San Joaquin Water Quality Coalition, the San Joaquin County and Delta Coalition and the Sacramento Valley Water Quality Coalition.

Regional Water Board enforcement staff regularly reports its activities in the Executive Officer report, filed in advance of each meeting of the Regional Water Board. ☞

Regional Board Adopts Groundwater Quality Protection Strategy

On September 22nd the Central Valley Regional Water Quality Control Board (Regional Board) adopted a resolution directing staff to develop workplans for "high priority actions that are currently funded" and contained in the Groundwater Quality Protection Strategy "Roadmap" (August 2010). The Roadmap is not initiating any new regulatory programs and is not a policy document. The intent of developing the Roadmap is to provide a long range planning document that defines the regulatory programs to be enhanced, and identify ways to expand on all partnering opportunities with other federal, state, and local agencies and/or organizations to protect groundwater quality. The resolution directs staff to develop work plans for highest priorities, and continue to pursue new, and improve existing, partnering opportunities to leverage existing resources and avoid duplication of efforts. ☞

Watershed Coalition News asks readers to pose questions to the Water Board. The question this issue is answered by Joe Karkoski, Program Manager, Central Valley Regional Water Quality Control Board.

What is the TMDL for chlorpyrifos and diazinon on the San Joaquin River?

In 2005, the Regional Water Board adopted numeric water quality objectives and total maximum daily load (TMDL) allocations for the two insecticides in the lower San Joaquin River. This was after more than 10 years of monitoring found chlorpyrifos and diazinon at elevated levels in the river. The Federal Clean Water Act and the state's Porter-Cologne Water Quality Control Act mandate that TMDLs and implementation plans be adopted to address this problem.

Who is responsible for complying with the TMDL?

All agricultural operations where chlorpyrifos or diazinon are used on land that is adjacent to or has drainage into the San Joaquin River or its tributaries are responsible for preventing these insecticides from reaching the waterways and contributing to exceedances of the water quality objective or loading allocation. Common pathways are surface water irrigation or storm drainage from treated fields or spray drift from applications to fields adjacent to the river or its tributaries.

If I have a field along the river, do I need a permit?

Members of the East San Joaquin Water Quality Coalition or Westside San Joaquin River Watershed Coalition are covered under a TMDL implementation plan submitted on their behalf by the coalitions. These plans include water quality monitoring and a management plan describing actions expected to reduce pesticide discharges. Non-coalition members must seek individual coverage or comply with a prohibition of discharge for the insecticides.

What if TMDL water quality objectives or loading allocations are not met?

The deadline for compliance is December 31, 2010. If exceedances occur after that date, the coalitions will need to revise management plans to identify improved management measures. Coalition members will need to implement the improved measures to meet the TMDL requirements. Non members who are not governed by individual or general waste discharge requirements and contributing to the exceedances will be considered in violation of the diazinon and chlorpyrifos prohibition of discharge. The Regional Water Board will take appropriate enforcement action against those parties. ☞

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Ag Commissioners/State Create MOU To Address Water Quality

Shortly after the Irrigated Lands Regulatory Program passed in 2003, two agricultural commissioners in Sacramento Valley posed a question to the Regional Water Board: how can our local agencies best help agriculture transition to this new program? Many conversations and meetings later, the Regional Water Board and the agricultural commissioners in Butte and Glenn counties created a Memorandum of Understanding focused on combining resources to address water quality issues in the region. The MOU, adopted in 2005, serves as a cooperative agreement between the entities and also led to initiating projects that have proven useful to both the local watershed coalitions and the signatory agencies.

Initial efforts focused on gathering management practice information from growers in watersheds where coalition sampling was occurring. Ag commissioner field staff walked the banks of Pine and Honcut Creeks in Butte County, gathering farming practice information such as crop, irrigation type and drainage patterns. Farm site inspection information was combined in a GIS map with a county hydrology layer, which includes irrigation, drainage and water district canals and ditches.

Glenn and Butte counties are also collaborating on a GIS mapping project as part of the MOU. The goal is to produce a comparable GIS mapping scheme that integrates management practice information.

Another project being developed for Glenn and Butte Counties is the Irrigated Lands Participation Check off. The goal is combine survey questions from several sources, including the local watershed coalition, into a user friendly, one page, check-off list for use by the ag departments. Growers would complete the form when renewing their pesticide permits.

An important effort of the MOU has been working to improve communication and interaction between the Butte County Agriculture Department and the Butte-Yuba-Sutter Watershed Coalition. Several meetings have been held between the two organizations to discuss facilitating future cooperation under the MOU. ☺

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